afety as the top priority. All instruments are tested and
aled at our facilities as a complete, safe, and working
it. Do not attempt to disassemble any Coronado
oduct, doing so will void your warranty and may
mpromise your safety. Coronado is obsessed with
afety and you should be too. Details of our safety
ecifications can be found at www.coronadofilters.com.
ever use a solar filter unless the manufacturer is able to
ovide such information. Before each use make sure the
oronado product does not appear damaged in any way.
you have any questions please contact Coronado or
ur dealer.

leaning

ean your filter with a fine camel hair brush to remove
y dirt from the objective. High quality lens cleaner and
soft cloth can also be used on the objective and the
dy itself. Take care of Coronado products as you
uld any high quality optical instrument and the views
ll last a lifetime.

Observing Terms

rominences – H-alpha emissions projecting beyond
e limb of the sun, consisting of complex clouds or
reamers of gas above or in the chromosphere.

laments – Prominences seen against the face of the
n, appearing as long narrow dark streamers or diffuse
mplex dark areas in H-alpha light. Filaments often
ark areas of magnetic shearing

ctive Region - A localized, transient volume of the
lar atmosphere in which plages, sunspots, and flares
ay be observed. Active regions are the result of
hanced magnetic fields and appear darker than the
rrounding areas with a roughly circular shape.

lage – Patchy H-alpha brightening on the solar disk,
ually found in or near active regions, which can last for
veral days. Plage is irregular in shape and variable in
ightness, marking areas of nearly vertical emerging or
connecting magnetic field lines.

unspots – Moderate to large spots usually consist of a
rker central region (umbra) and a lighter halo
nsisting of many short fine fibrils (penumbra).

lares - A sudden eruption of
ergy in the solar atmosphere
sting minutes to hours, from
hich radiation and particles are
nitted.

For the past four years Coronado has played host to the premier solar observing event in the world, Hands on The Sun™! This "star party" is dedicated to observing, imaging, and learning about the Sun. A three-day event that includes lectures, field trips, and of course "hands on" time with all of Coronado's instruments. Make plans to come by and join us for H.O.T.S. 2005 where you can meet fellow enthusiasts, use our latest cutting edge technology, and get to know the people behind Coronado's revolutionary equipment. H.O.T.S is held each fall in Tucson Arizona, see our website for exact dates, accommodation, and registration. Observers of all levels of experience are welcome!

About Hydrogen Alpha

HYDROGEN ALPHA

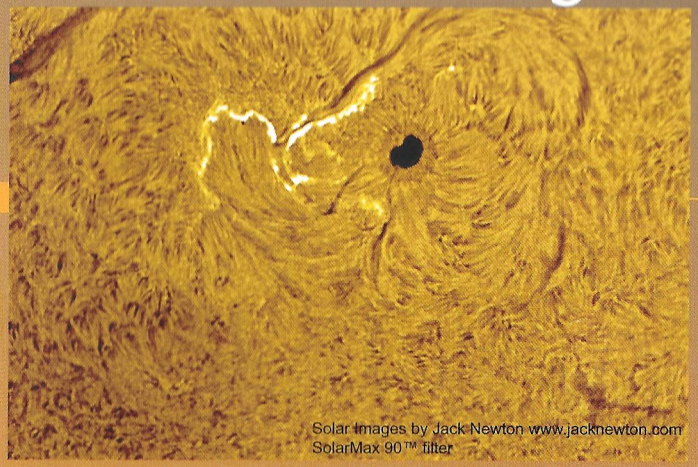
The red light of hydrogen alpha with a wavelength of 656.3nm (1nm = 1 billionth of a meter) is a very prominent feature in the solar light spectrum since hydrogen makes up 75% by weight of the Sun. Many features associated with solar activity are especially prominent in the chromosphere - the layer of the Sun in which the hydrogen is most easily visible. The Sun is dynamic and constantly changing. It is seething with activity and with a very modest aperture telescope you are able to observe detail that is mind blowing. Viewing solar prominences and flares, violent eruptions of gas in the sun's chromosphere, requires a specialized filter called a Hydrogen-alpha filter. Hydrogen-alpha (H-alpha, or Hα) filters are so-called because they transmit a specific wavelength of light in the far red end of the spectrum called the hydrogen-alpha line. H-alpha filters are available in a variety of bandpasses. The "bandpass" of a filter tells how wide a region of the light spectrum is transmitted around the primary wavelength. The narrower the bandpass, the more surface detail on the Sun becomes visible through the filter.

The ANGSTROM

An Angstrom is the unit of measurement for the wavelength of light, usually abbreviated to Å. One Angstrom is 0.1 nanometer, or one ten-billionth of a metre. Light in the middle of the visible spectrum has a wavelength of 5,500Å. The hydrogen alpha spectral line has a wavelength of 6562.8Å. This is the reason that most of the SolarMax series filters have a bandwidth of <0.7Å. To further increase image contrast and the visibility of detail, these filters can be used in tandem. Properly done, this will decrease this bandwidth to <0.5Å and, perhaps more importantly, significantly decrease the "tails" of the passband which allow transmission of out-of-band light due to the shape of the filter passband. At <0.7Å there is a very nice balance between prominences and surface detail. At <0.5Å prominences are still well defined and surface detail is enhanced. When you get to around <0.35Å you lose prominences in favour of surface detail. Coronado will manufacture to specific bandpasses and wavelengths other than hydrogen alpha to special order.

CORONADO

Product Catalog



Solar Images by Jack Newton www.jacknewton.com
SolarMax 90™ filter

Thank you for your interest in Coronado Instruments, Inc. and welcome to the ever-growing field of solar observing. All our products are the results of years of optical engineering experience and our determination to provide affordable Solar instrumentation to the amateur community. We hope you enjoy our Solar observing instruments and find them to be exciting and addictive tools. Please take advantage of our photo gallery and chat group, 'Solar Chat', both at www.coronadofilters.com

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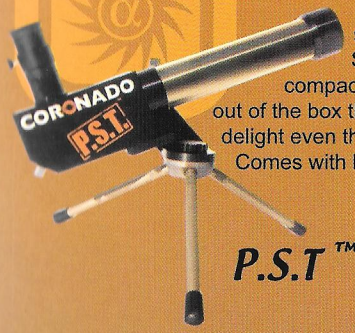
Tucson, AZ, 85710
Tel: (520) 740-1561
Fax: (520) 624-5083
Toll Free in USA: 1-866-SUNWATCH

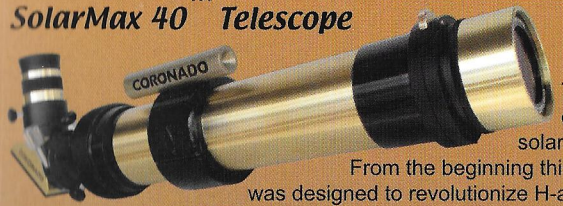
Personal Solar Telescope™ –They said it couldn't be done! Two years later we are proud to announce the arrival of sub-angstrom H-alpha at a unheard of price! Ideal for the solar enthusiast on a budget the PST™ takes advantage of the same technology used in our SolarMax Telescope™ series in a compact cost saving design. Ready to use out of the box this complete H-alpha telescope will delight even the most experienced observer. Comes with built in Sol Ranger™ Sun finder.



P.S.T™

Aperture - 40mm
F/L - 400mm
F/Ratio - 10
Bandwidth - <1.0Å to <0.6Å
Thermal Stability - 0.005Å/C
Blocking - full Blocking >10^5 from EUV to far IR

SolarMax 40™ Telescope



The original solar 'scope. From the beginning this telescope was designed to revolutionize H-alpha viewing. SolarMax 40 Telescope is light-weight and extremely portable at just under 3lbs! Don't let size fool you, this little scope gets some big images, just ask any of the thousands of owners worldwide! Includes travel case and clamshell mounting ring. Sol Ranger and CEMAX™ eyepieces optional. Also available in a <0.5A version, contact Coronado for details!

Aperture - 40mm	Bandwidth - <0.7Å to <0.5Å
F/L - 400mm	Thermal Stability - 0.005Å/C
F/Ratio - 10	Blocking - full Blocking >10^5 from EUV to far IR

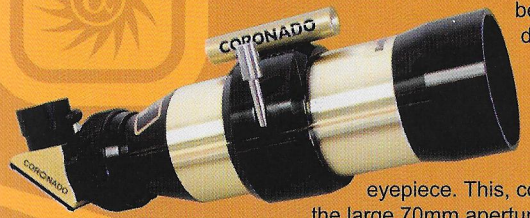
SolarMax 60™ Telescope

The perfect telescope for the keen solar observer. Retains the portability of the 40mm telescope with the advantage of a larger aperture. The 60mm aperture of the front mounted narrowband etalon allows for increased resolution and provides enhanced performance for both visual and photographic use. The SolarMax 60 Telescope <0.7Å comes with clamshell mounting rings, CEMAX 25mm eyepiece and a hard travel case. Sol Ranger is optional. Also available in a <0.5Å version, contact Coronado for details!

Aperture - 60mm
F/L - 400mm
F/Ratio - 6.6
Bandwidth - <0.7Å to <0.5Å
Thermal Stability - 0.005Å/C
Blocking - full Blocking >10^5 from EUV to far IR

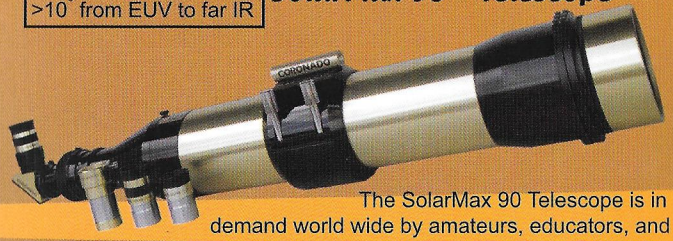
SolarMax 70™ Telescope

A teachers best friend! The SolarMax 70 Telescope has been specially designed as a sealed unit with no removable parts other than the eyepiece. This, combined with the large 70mm aperture, provides performance, portability, and a tamper proof instrument making the SolarMax 70 Telescope ideal for use in all settings. The SolarMax 70 Telescope <0.8Å comes with clamshell mounting rings, Sol Ranger Sun finder, and a 25mm CEMAX eyepiece.



Aperture - 70mm
F/L - 400mm
F/Ratio - 5.7
Bandwidth - <0.8Å
Thermal Stability - 0.005Å/C
Blocking - full Blocking >10^5 from EUV to far IR

SolarMax 90™ Telescope



The SolarMax 90 Telescope is in demand world wide by amateurs, educators, and professional observers. The SolarMax 90 Telescope is noted for its incredibly sharp,contrasty H-alpha views and stunning detail. Compatible with most imaging systems making imaging a breeze. Users have produced images that rival those gathered by multi million dollar systems! The SolarMax 90 Telescope <0.7Å comes with clamshell mounting rings, a full set of CEMAX eyepiece, SolRanger Sun finder, and a hard travel case. Also available in a <0.5A version, contact Coronado for details!

Aperture - 90mm	Bandwidth - <0.7Å to <0.5Å
F/L - 800mm	Thermal Stability - 0.005Å/C
F/Ratio - 8.8	Blocking - full Blocking >10^5 from EUV to far IR

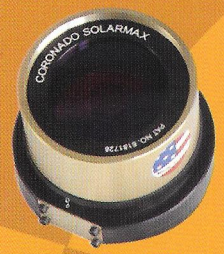
BinoMax™

Coronado's first filter kit for binoculars. Two matched SolarMax 40 filters and special blocking filter create amazing 3-D viewing of our nearest star in sub-angstrom H-alpha. Available for the Canon™ IS series binoculars, contact Coronado regarding other makes and models.

Aperture - 40mm
Bandwidth - <0.7Å
Thermal Stability - 0.005Å/C
Blocking - full Blocking

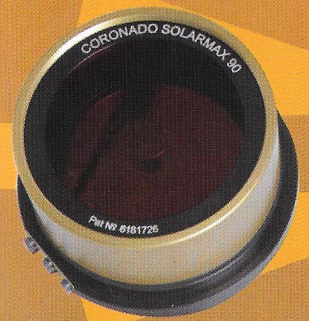
SolarMax™ Series Filters

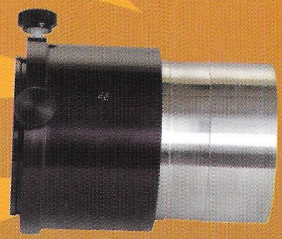
A conventional telescope can be converted for Hα viewing with the addition of a SolarMax ser filter, blocking filter and adaptor plate. Select a SolarMax filter (apertures 40, 60, 90 & 140mm to fit the aperture of the host telescope (large aperture telescopes must be correctly masked down with a Coronado adaptor plate) and, bas on the focal length of the telescope, select a blocking filter. Use the chart below as a guide.



SolarMax 40™ Filter

SolarMax 60™ Filte





BF-30™

SolarMax 90™ Filter

BF-5™

BF-10™

BF-15™

Focal Length	Blocking Filter
<500mm	BF-5
<1000mm	BF-10
<1500mm	BF-15
<3000mm	BF-30

The BF-5, BF-10, and BF-15 are all 1.25" rig angled while the BF-3 is a 2" straight through Once you own a SolarMax series filter you are able to upgrac to the appropriate SolarMax OTA for increased performance